DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING SERVICES
Office of Structural Materials
Quality Assurance and Source Inspection

Bay Area Branch
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Contract #: 04-0120F4
Cty: SF/ALA Rte: 80 PM: 13.2/13.9
File #: 69.28

WELDING INSPECTION REPORT

Resident Engineer: Pursell, Gary
Address: 333 Burma Road
City: Oakland, CA 94607

Report No: WIR-015655
Date Inspected: 17-Jul-2010

Project Name: SAS Superstructure
Prime Contractor: American Bridge/Fluor Enterprises, a JV
Contractor: Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island

OSM Arrival Time: 700
OSM Departure Time: 1900
Location: Shanghai, China

CWI Name: Li Yang and Zhu Zhong Hai

CWI Present:	☑ Yes	☐ No		**Inspected CWI report:**	☐ Yes	☑ No	☐ N/A	
Rod Oven in Use:	☑ Yes	☐ No	☐ N/A	**Electrode to specification:**	☑ Yes	☐ No	☐ N/A	
Weld Procedures Followed:	☑ Yes	☐ No	☐ N/A	**Qualified Welders:**	☑ Yes	☐ No	☐ N/A	
Verified Joint Fit-up:	☐ Yes	☑ No	☐ N/A	**Approved Drawings:**	☑ Yes	☐ No	☐ N/A	
Approved WPS:	☑ Yes	☐ No	☐ N/A					
Delayed / Cancelled:	☐ Yes	☑ No	☐ N/A					

Bridge No: 34-0006
Component: OBG Trial Assembly

Summary of Items Observed:

On this date Caltrans OSM Quality Assurance (QA) Inspector Mr. S. Manjunath Math was present during the time noted above for observations relative to the work being performed.

This QA Inspector randomly observed the following work in progress:

Orthotropic Box Girder (OBG) Trial Assembly Areas

Segment 9DE

This QA Inspector witnessed the final bolt tension verification on bolts connecting the Clips to the Floor Beam at Bottom Panel, Side Panel (Cross Beam and Bike Path side) at Panel Points (PP) 80, PP 81 and PP 82 for Segment 9DE. The QA Inspector verified the bolt tension on a random basis and the results appeared to be in general compliance. The Inspection was performed against Notification No. 00428 dated July 17, 2010.

The bolt sizes used were M16 x 45 RC Lot # DHGM160001 and the final torque value established was 210 N-m.

The bolt sizes used were M16 x 50 RC Lot # DHGM160004 and the final torque value established was 180 N-m.

The bolt sizes used were M16 x 65 RC Lot # DHGM160006 and the final torque value established was 180 N-m.

The manual torque wrench used to verify tension was S/N XO2-114. Please reference the pictures attached for

more comprehensive details.

Segment 9EE

This QA Inspector witnessed the final bolt tension verification on bolts connecting the Clips to the Floor Beam at Bottom Panel, Side Panel (Cross Beam and Bike Path side) at Panel Points (PP) 83, PP 84 and PP 85 for Segment 9EE. The QA Inspector verified the bolt tension on a random basis and the results appeared to be in general compliance. The Inspection was performed against Notification No. 00428 dated July 17, 2010.

The bolt sizes used were M16 x 45 RC Lot # DHGM160001 and the final torque value established was 210 N-m.

The bolt sizes used were M16 x 50 RC Lot # DHGM160004 and the final torque value established was 180 N-m.

The bolt sizes used were M16 x 65 RC Lot # DHGM160006 and the final torque value established was 180 N-m.

The manual torque wrench used to verify tension was S/N XO2-114. Please reference the pictures attached for more comprehensive details.

Segment 7AE

This QA Inspector witnessed the final tension verification for steel cable connecting diagonally the Cable Tray Crosby Clips. Cable Trays are installed at Bottom Panel Cross Beam and Bike Path side between Panel Points (PP) 47.25 and PP 48 for Segment 7AE. The QA Inspector verified the tension of steel cable by pulling and pushing manually and the results appeared to be not in general compliance. The Inspection was performed against Notification No. 00427 dated July 17, 2010.

ZPMC QC and QA confirmed that they will re-offer the inspection after rectification to Caltrans QA.

Segment 7BE

This QA Inspector witnessed the final tension verification for steel cable connecting diagonally the Cable Tray Crosby Clips. Cable Trays are installed at Bottom Panel Cross Beam and Bike Path side between Panel Points (PP) 49.25 and PP 50 for Segment 7BE. The QA Inspector verified the tension of steel cable by pulling and pushing manually and the results appeared to be not in general compliance. The Inspection was performed against Notification No. 00427 dated July 17, 2010.

ZPMC QC and QA confirmed that they will re-offer the inspection after rectification to Caltrans QA.

Segment 7CE

This QA Inspector witnessed the final tension verification for steel cable connecting diagonally the Cable Tray Crosby Clips. Cable Trays are installed at Bottom Panel Cross Beam and Bike Path side between Panel Points (PP) 52.5 to PP53, PP 53 to PP 54 and PP 54 to PP 55 for Segment 7CE. The QA Inspector verified the tension of steel cable by pulling and pushing manually and the results appeared to be not in general compliance. The Inspection

was performed against Notification No. 00427 dated July 17, 2010.

ZPMC QC and QA confirmed that they will re-offer the inspection after rectification to Caltrans QA.

Segment 7DE

This QA Inspector witnessed the final tension verification for steel cable connecting diagonally the Cable Tray Crosby Clips. Cable Trays are installed at Bottom Panel Cross Beam and Bike Path side at Panel Points (PP) 55.25 to PP 56, PP 56 to PP 57 and PP 57 to PP 58 for Segment 7DE. The QA Inspector verified the tension of steel cable by pulling and pushing manually and the results appeared to be not in general compliance. The Inspection was performed against Notification No. 00427 dated July 17, 2010.

ZPMC QC and QA confirmed that they will re-offer the inspection after rectification to Caltrans QA.

Segment 7EE

This QA Inspector witnessed the final tension verification for steel cable connecting diagonally the Cable Tray Crosby Clips. Cable Trays are installed at Bottom Panel Cross Beam and Bike Path side at Panel Points (PP) 58.25 to PP 59, PP 59 to PP 60 and PP 60 to PP 60.75 for Segment 7EE. The QA Inspector verified the tension of steel cable by pulling and pushing manually and the results appeared to be not in general compliance. The Inspection was performed against Notification No. 00427 dated July 17, 2010.

ZPMC QC and QA confirmed that they will re-offer the inspection after rectification to Caltrans QA.

Segment 7BE

This QA Inspector witnessed the final bolt tension verification on bolts connecting the Handrail to Fiber Glass Grating between Panel Points (PP) 50 and PP 51 for Segment 7BE at Bottom Panel and Side Panel Cross Beam at FL3 area. The QA Inspector verified the bolt tension on a random basis and the results appeared to be in general compliance. The Inspection was performed against Notification No. 00427 dated July 16, 2010.

The bolt sizes used were M16 x 95 RC Lot # DHGM160036 and the final torque value established was Snug Tight.

The manual Spanner was used to verify Snug Tight.

Segment 9DE

This QA Inspector observed the in process fillet welding operation by the Shielded Metal Arc Welding (SMAW) process. The weld joint was designated as DP699-001-013/014 and DP699-001-015/016. The welder identification was 067765 and was observed welding in the 4F (Overhead) position using approved Welding Procedure Specification WPS-B-T-4114. The piece mark was identified as the Deck Panel I-Ribs hold back area on the Cross Beam Side.

Segment 9EE

This QA Inspector observed the in process fillet welding operation by the Shielded Metal Arc Welding (SMAW) process. The weld joint was designated as DP700-001-008/007 and DP699-001-012/011. The welder identification was 067765 and was observed welding in the 4F (Overhead) position using approved Welding Procedure Specification WPS-B-T-4114. The piece mark was identified as the Deck Panel I-Ribs hold back area on the Cross Beam Side.

Segment 9BW

This QA Inspector observed the in process fillet welding operation by the Flux Cored Arc Welding (FCAW) process. The weld joint was designated as SSD27-PP-081-043/044, SSD27-PP-081-049/050, SSD27-PP-081-051/052, SSD27-PP-081-055/056. The welder identification was 068493 and 067947 and was observed welding in the 2F (Horizontal) position using approved Welding Procedure Specification WPS-B-T-2132. The piece mark was identified as the Partial Height Diaphragm at FL3 location.

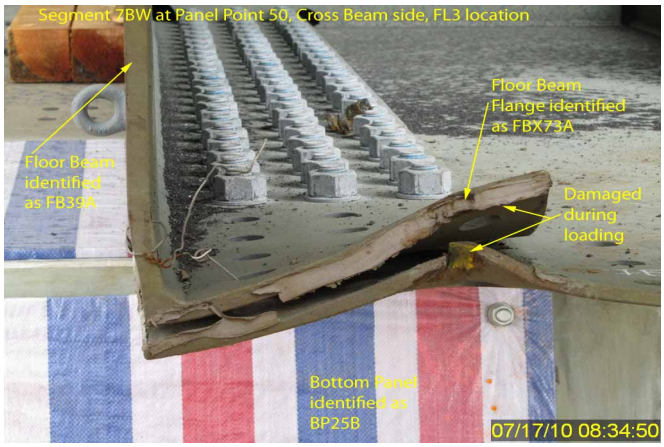
Segment 9BW

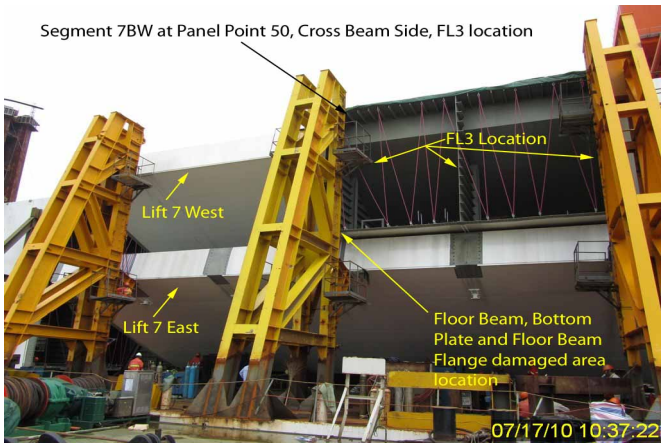
This QA Inspector observed the in process fillet welding operation by the Flux Cored Arc Welding (FCAW) process. The weld joint was designated as SSD27-PP-081-041/042, SSD27-PP-081-045/046, SSD27-PP-081-053/054 and SSD27-PP-081-057/058. The welder identification was 068493 and 067942 and was observed welding in the 3F (Vertical) position using approved Welding Procedure Specification WPS-B-T-2133. The piece mark was identified as the Partial Height Diaphragm at FL3 location.

Segment 7BW

This QA Inspector observed that the ZPMC personnel while loading the Lift 7 West on ZPMC ship # 19 damaged the Floor Beam at Panel Point 50, Cross Beam side at FL3 location.
Please reference the pictures attached for more comprehensive details.

Unless otherwise noted, all work observed on this date appeared to generally comply with applicable contract documents.





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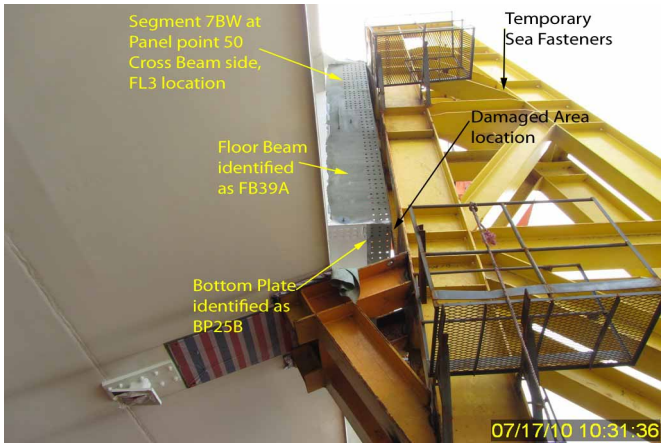

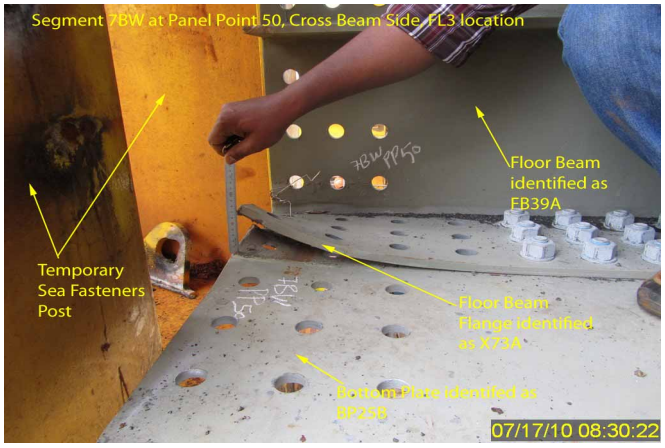

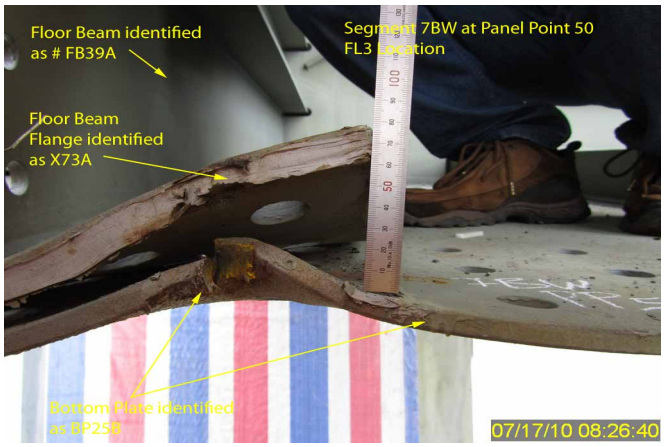

Summary of Conversations:

No relevant conversations were reported on this date.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Eric Tsang 150000422372, who represents the Office of Structural Materials for your project.

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Inspected By:	Math,Manjunath	Quality Assurance Inspector
Reviewed By:	Peterson,Art	QA Reviewer